

Application Serial No.: 10/630,620
Group Art Unit No.: 2636
Applicant: David A. Vogel

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Original): A controller for cooperating with a vessel's existing horn to automatically generate sound navigational signals, said controller comprising:

an installation-type detector for determining a controller installation type;

a user interface with a mode selector having one or more mode settings; and a microprocessor for communicating with said mode selector and said horn to facilitate the selective control of said horn.

Claim 2 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller is activated by said mode selector.

Claim 3 (Currently amended): The controller of claim 2, wherein said installation-type detector determines said controller installation type when ~~said~~ the controller is activated.

Claim 4 (Currently amended): The controller of claim 3, wherein said controller installation type is for parallel signaling for blast pattern selection.

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Claim 5 (Currently amended): The controller of claim 4, wherein said microprocessor is activated by ~~said~~ the controller when said mode selector is set in one of said one or more mode settings.

Claim 6 (Original): The controller of claim 5, wherein said microprocessor determines which of said one or more mode settings has been selected.

Claim 7 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller is activated by a vessel's existing controls.

Claim 8 (Currently amended): The controller of claim 7, wherein said installation-type detector determines said controller installation type when ~~said~~ the controller is activated.

Claim 9 (Currently amended): The controller of claim 8, wherein said controller installation type is for serial signaling for blast pattern selection.

Claim 10 (Currently amended): The controller of claim 9, wherein said microprocessor is activated by ~~said~~ the controller when said mode selector is set in one of said one or more mode settings.

Claim 11 (Original): The controller of claim 10, wherein said microprocessor cooperates with said vessel's existing controls to determine which of said one or more mode settings has been selected.

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Claim 12 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller cooperates with a timing for ensuring said sound navigational signals are properly timed and/or spaced.

Claim 13 (Original): The controller of claim 12, wherein said timing system is a separate component separate from said microprocessor.

Claim 14 (Original): The controller of claim 12, wherein said timing system is part of said microprocessor.

Claim 15 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller is programmable to support a variety of different mode selections and/or any combinations thereof.

Claim 16 (Original): The controller of claim 1, wherein said random number generator is part of said microprocessor.

Claim 17 (Original): The controller of claim 1, wherein said random number generator is a computer software program for said micro processor.

Claim 18 (Original): The controller of claim 1, further comprising a random number generator.

Claim 19 (Original): The controller of claim 18, wherein said random number generator adds a random or a pseudo random time length to a base period of time between said sound navigational signals.

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Claim 20 (Original): The controller of claim 19, wherein said added random or pseudo random time length provides anti-synchronization for preventing any overlapping of sound navigational signals between different vessels.

Claim 21 (Original): The controller of claim 19, wherein said random number generator operates independent of any innate variability associated with different components.

Claim 22 (Original): The controller of claim 19, wherein said random or pseudo random time length is in a range of 0 seconds to 120 seconds less said base period of time.

Claim 23 (Original): The controller of claim 22, wherein the sum of said pseudo random time length and said base period does not exceed 120 seconds.

Claim 24 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller has a power/sail type detecting circuit.

Claim 25 (Original): The controller of claim 24, wherein said power/sail type detecting circuit is selectively connectable to a power source for a vessel under power and/or a power source for a vessel under sail.

Claim 26 (Currently amended): The controller of claim 25, wherein ~~said~~ the controller has a miswire protection circuit for protecting ~~said~~ the controller from improper installation.

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Claim 27 (Original): The controller of claim 1, wherein said microprocessor has memory to store controller software.

Claim 28 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller has a brownout protection circuit for causing a reset signal of said microprocessor to be asserted when the power supply falls below a predetermined level.

Claim 29 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller has a relay driver circuit for controlling a relay electrically connected to said existing navigational controls.

Claim 30 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller has a pre-signal warning feature.

Claim 31 (Original): The controller of claim 30, wherein said pre-signal warning is an audible signal.

Claim 32 (Original): The controller of claim 30, wherein said pre-signal warning is a visual signal.

Claim 33 (Original): The controller of claim 24, wherein said power/sail type detecting circuit is monitored by said microprocessor to determine any change in status.

Claim 34 (Currently amended): The controller of claim 1, wherein ~~said~~ the controller has an automated distress signal feature.

Claim 35 (Original): The controller of claim 34, wherein

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said distress signal feature has a predetermined signal pattern.

Claim 36 (Original): The controller of claim 35, wherein said signal pattern is the Morse code SOS pattern.

Claim 37 (Original): The controller of claim 35, wherein said signal pattern has a cycle or frequency step down feature.

Claim 38 (Original): The controller of claim 1, wherein said microprocessor can reply with an acknowledgement to interaction detected from an operator.

Claim 39 (Cancelled).

Claim 40 (Currently amended): The controller of claim 1, wherein a vessel's existing controls are used to activate ~~said~~ the controller and to select one or more signal settings.

Claim 41 (Currently amended): A method for automatically generating sound navigational signals comprising the steps of:

providing a horn or a signaling device, said signaling device having a controller having an installation-type detector for determining a controller installation type, a user interface with a mode selector having one or more mode settings, and a microprocessor for communicating with said mode selector and said horn to facilitate the selective control of said horn to generate sound navigational signals;

activating said controller via said mode selector of said user interface;

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initializing said microprocessor via said mode selector;

determining said controller installation type via said
installation-type detector;

determining which of said mode settings has been selected
via said microprocessor; and

generating sound navigational signals via said horn in
accordance with said selected mode.

Claim 42 (Original): The method of claim 41, further
comprising a step of performing a self test is implemented after
said step of initializing of said microprocessor and prior to
said step of determining controlling installation type.

Claim 43 (Currently amended): The method of claim 41,
further comprising a step of determining whether ~~said~~ the
controller is cooperating with a vessel under sail or a vessel
under power is implemented after said step of determining which
of said mode settings has been selected and prior to said step
of generating sound navigational signals.

Claim 44 (Original): The method of claim 41, further
comprising a step of providing a pre-signal warning to be
implemented after said step of determining which of said mode
settings has been selected and prior to said step of generating
sound navigational signals.

Claim 45 (Original): The method of claim 44, wherein said

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pre-signal warning is an audio signal, a visual signal or a combination thereof.

Claim 46 (Original): The method of claim 41, further comprising a step of providing a delay for a base time period following said step of generating sound navigational signals.

Claim 47 (Original): The method of claim 46, further comprising supplying a random time delay by a random number generator and adding to said base time period.

Claim 48 (Original): The method of claim 47, further comprising a step of repeating said sound navigational signal in accordance with said mode selector to be implemented after said step of adding said random time delay to said base time period.

Claim 49 (New): The controller of claim 1, wherein said installation-type detector further comprises a circuit being connected to the controller having program instructions for said circuit to determine the controller installation type, said installation type detector and the controller in response thereto selecting a sound navigational signaling pattern, said selection being dependent upon a configuration of the vessel type.

Claim 50 (New): A controller for cooperating with a vessel's existing horn to automatically generate sound navigational signals, said controller comprising:

an user interface functionality detector for determining a controller installation type;

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a user interface with a mode selector having one or more mode settings; and

a microprocessor for communicating with said mode selector and said horn to facilitate the selective control of said horn.

Claim 51 (New): The controller of claim 50, wherein said user interface functionality detector determines said controller installation type from a plurality of controller installation types with each of said plurality of controller installation types being different from one another.